|                        | Г              |                  |                  | Cash   |  |              |
|------------------------|----------------|------------------|------------------|--|--|--------------|
|                        |                |                  | Compensation     | Payments   | Options                                      | Shares       |
| ATTACHMENT A           | İ              | Date(s)          | Arrangements     | Made   | Issued                                       | Owned        |
| AKHTAR                 |                |                  | Employee         |  | EE Options                                   |              |
| (Employee)             | Dr. Kamran     | -                | Salary           | -  | Only   | None         |
| BALDWIN                |                |                  |                  |  |  |              |
| (NASA)                 | Dr. R.         | -                | . <b>-</b>       | -  | None   | None         |
| BONIFACE               |                |                  |                  |  |  |              |
| (Chalk River Labs)     | Dr. H.A.       | -                | _                | - '  | None   | None         |
|                        |                |                  | Ad Hoc/          |  |  |              |
|                        | Dr.            |                  | One-time         |  |  |              |
| (PSU Student)          | (Michael)      | 9/13/1994        | Only             | 9/13/1994  | None   | None         |
| CHANG                  |                |                  | Employee         |  | EE Options                                   |              |
| (Employee)             | Dr. Zhixiang   | -                | Salary           | -  | Only   | None         |
| CHEN                   |                |                  |                  |  | EE Options                                   |              |
| (EE & Consultant) CHEN | Dr. Chun-Ku    | 6/1/04-5/31/05   | \$50/hour        | 2/7/2005   | Only   | None         |
| *                      | Dr. Xuemin     |                  | Employee         |  | EE Options                                   | None         |
| (Employee)             | Dr. Xuemin     | <del>-</del>     | Salary           | -  | Only   | None         |
| CLARK                  |                |                  |                  |  |  |              |
| (INP Greifswald)       | Dr. H.R.       | •                | -                | -  | None   | None         |
|                        |                |                  |                  |  | Options granted<br>from 9/9/96 to<br>8/5/97; |              |
| CONRADS                |                | •                |                  |  | some options                                 |              |
| (INP Greifswald        |                | 8/4/99-9/23/05   | 2 wire transfers | 2/14/00  | expired;                                     | Some options |
| transferred agrmnt     | Dr.            |                  |                  | 6/12/01  | some options                                 | exercised    |
| to Conrads)            | appendes       |                  |                  |  | exercised 9/7/06                             | 9/7/06       |
| CRAIG                  | Dr. W.Y.       | •                | -                | -  | None   | None         |
| CRAW-IVANCO            |                |                  |                  |  |  |              |
| (Chalk River Labs)     | Dr. M.T.       | _                | -                | _  | None   | None         |
| DAYALAN                |                |                  | Employee         |  | EE Options                                   |              |
| (Employee)             | Dr. Ethirajulu | -                | Salary           | -  | Only   | None         |
| DHANDAPANI             |                |                  | Employee         |  | EE Options                                   |              |
| (Employee)             | Dr. Bala       | -                | Salary           | -  | Only   | None         |
|                        |                | 7/30/03-1/31/04  | \$35/hour        | 2/28/02  |  |              |
| DONG                   |                | 2/1/04-7/31/04   | \$45/hour        | 8/20/03  | EE Options                                   |              |
| (EE & Consultant)      | Dr. Jinquan    | 11/16/04-5/1/505 | \$45hour         |  | Only   | None         |
| ECHEZURIA              |                |                  | Employee         |  | EE Options                                   |              |
| (Employee)             | Alejandra      | •                | Salary           | -  | Only   | None         |
| FRALICK                | D- C C         |                  |                  |  | None   | Nama         |
| (Semitech) FUELLING    | Dr. G.C.       | -                | -                | -  | None   | None         |
| (U Nevada)             | Or<br>Stephen  | _                | 1                | _  | None   | None         |
| GAMBERALE              | Luca           |                  |                  | <del>                                     </del> | None   | None         |
| GERNERT                |                |                  |                  |  |  | 11010        |
| (Thermacore)           | Dr. N.J.       | -                | _                | _  | None   | None         |
| , , , , , , ,          |                |                  |                  |  | EE & Officer                                 |              |
|                        |                |                  |                  |  | Options Issued                               | Shares Owned |
| GOOD                   |                |                  | Employee         |  | Beginning                                    | Beginning    |
| (EE & Officer)         | William        | -                | Salary           | <u>-</u>   | 9/1/92                                       | 1991         |

| JANSSON   G/10/02-10/31/02   \$100   10/17/97   Site of the ex-wife and strictly   Stewarts   Stew  |                                       | T             |                  | <del></del>  | 7/10/05      | т               |                  |
|--|---------------------------------------|---------------|------------------|--------------|--------------|-----------------|------------------|
| 11/1/02-10/31/03   \$50/hour   50/hour   \$50/hour   \$5 |                                       |               | 11/1/01 10/21/02 | ¢=0/5        |              |                 |                  |
| SEEENIG   3/8/05-3/7/05   \$50/hour   \$50/h |                                       |               |                  | · ·          |              | ]               |                  |
| REENIG   |                                       |               |                  | •            | 10/14/02     | i               |                  |
| REENIG   |                                       |               | 3/8/04-3/7/05    | \$50/hour    |              |                 |                  |
| None  | •                                     |               | 3/8/05-3/7/06    | \$50/hour    |              |                 |                  |
| ALDEMAN   Nelson   3/8/07-3/7/08   \$50/hour   Only   None   | REENIG                                |               | 3/8/06-3/7/07    | \$50/hour    |              | EE Options      |                  |
| MT Lincoln Labs    Dr. C.W.   -   -   None   None   Employee   | EE & Consultant)                      | Nelson        |                  |              |              | •               | None             |
| Mile   Lincoln Labs   Dr. C.W.   -   -   None   None   Employee  | AL DEMAN                              |               |                  |              |              |                 |                  |
| Employee   |                                       | Dr. C.W       | _                |              | _            | None            | None             |
| Complement   Com   |                                       | 51. 5.11.     |                  | Employee     | -            |                 | None             |
| CKS  |                                       | D. Illiana    |                  | , ,          |              | ' '             | • •              |
| Salary   Only   None   |                                       | Dr. Jillang   | -                |              |              |                 | None             |
| Dr. J.W.   Dr. G.W.  |                                       | C4            |                  | • •          |              | •               |                  |
| Chalk River Labs    Dr. J.W.     None   None   None   None   | =mpioyee)                             | Steven        | -                | Salary       | -            | Only            | None             |
| SELER   MIT Lincoln Labs   Dr. G.W.   -   -   None   Non   | ILBORN                                |               |                  |              |              |                 |                  |
| ACOX NEL)  ACOX NEL)  Michael  ACOX NEL)  Michael  ANSSON Rowan U) Dr. Peter M. (contract) None  None  None  Purchased sl 7/2/97; giffed to ex-wife and 5/1/07 None  None  None  None  Purchased sl 7/2/97; giffed to ex-wife and 5/1/07 None  N   | Chalk River Labs)                     | Dr. J.W.      | -                | -            | -            | None            | None             |
| ACOX   Date   None  |                                       |               |                  |              |              |                 |                  |
| ACOX   Dr.   Dr.   Dr.   Dr.   Dr.   Dr.   Dr.   Dr.   Purchased st.   Purchas   |                                       |               |                  |              |              |                 |                  |
| ACOX (NEL)  ANSSON ANSSON ANSSON BROWN U) ANSSON BROWN U) Dr. Peter M. Contract) COPTIONS GRAND CONTROL  ANSSON BROWN U) Dr. Peter M. Contract) COPTIONS GRAND CONTROL  CONTRO   | VIT Lincoln Labs)                     | Dr. G.W.      | •                | -            |              | None            | None             |
| ACOX   NEL)   Michael   -   -  |                                       |               |                  |              |              |                 |                  |
| ACOX   Note   Stayeng   Note   |                                       |               |                  |              |              | Options granted |                  |
| ACOX   NREL   Michael   -  |                                       |               |                  |              |              |                 |                  |
| Michael   -   -  | ACOX                                  | Dr.           |                  |              | ]            |                 |                  |
| ANSSON ROWAN U) Dr. Peter M.  (contract) S100 10/17/97 S102/31/2002 None S/11/07 None None S/11/07 None None None None None  CURTZ PSU/) Stawart PSU/) EE U of Ohio) Dr. Jang-Jung Dr. Ying S/17/03-5/30/03 S/27/03-5/30/03 S/   | INEL)                                 | (Mohae)       | -                | _            | _            |                 | None             |
| ANSSON Rowan U) Dr. Peter M. (contract) S100 10/17/97 gifted to ex-wife and 5/1/07 None S7/1/07 None None None None None None None None  |                                       |               | •                |              |              |                 | Purchased shares |
| ANSSON ROWAN U) Dr. Peter M. 6/10/02-10/31/02 \$100 10/17/97 gifted to ex-wife and ex-wife   |                                       |               |                  |              |              | ·               | 7/2/97:          |
| ANSSON ROWAN U) Dr. Peter M. (6/10/02-10/31/02 \$100 10/17/97 None 5/10/07 None None None None None 5/10/07 None None None None None None 5/10/07 None None None None None None None None  |                                       |               |                  |              |              |                 |                  |
| Rowan U  | ANSSON                                |               | 6/10/02-10/31/02 | \$100        | 10/17/97     |                 | •                |
| None  |                                       | Dr Peter M    |                  |              |              | None            |                  |
| CRYUKOV   Moscow Power   Engineering   Dr. A.P.   None  |                                       |               | - 10011111019    | - 4.0        | 120112002    |                 |                  |
| Moscow Power Engineering Institute)   Dr. A.P.   |                                       |               |                  |              | <del> </del> | INOTIC          | None             |
| Dr. A.P.   -   -   None   No   |                                       |               |                  |              | 1            |                 |                  |
| None  |                                       |               |                  |              |              |                 |                  |
| CURTZ   Dr.   Dr.   Dr.   Stewarts   -   -   -   -     -   |                                       | Dr A P        | _                | _            |              | None            | None             |
| Survey   Stewarts  | ioututo)                              | S S           | -                | -            | -            |                 | None             |
| Stewart   -   -   -  |                                       | i i           |                  |              |              |                 | •                |
| Stewarit   | (IIDT7                                | 600           |                  |              |              |                 |                  |
| Section  |                                       | 1,72          |                  |              |              | , ,             |                  |
| ## Dr. Jang-Jung   |                                       | Stewart .     | -                | -            | ļ            | expired         | None             |
| B/6/01   \$100/hour   5/9/03-5/16/03   \$80/hour   5/23/03   5/27/03-5/30/03   \$80/hour   5/23/03   5/27/03-5/30/03   \$80/hour   5/23/03   \$80/hour   5/23/03   \$80/hour   5/30/03-6/30/03   \$45/hour   EE Options   Only   None   MARCHESE   Dr.   Ground   Gr  |                                       | D             | •                |              |              |                 |                  |
| 5/9/03-5/16/03   \$80/hour   5/23/03   | o or onio)                            | Dr. Jang-Jung | 9/6/04           | ¢100/5000    | 10/04/04     | None            | None             |
| 5/27/03-5/30/03   \$80/hour  |                                       | }             |                  |              |              |                 |                  |
| S/30/03-6/30/03   \$45/hour   EE Options   Only   None   |                                       |               |                  |              | 5/23/03      |                 |                  |
| Total  |                                       |               |                  | · ·          |              |                 |                  |
| ### ### ##############################   |                                       | Į į           |                  |              |              |                 |                  |
| MARCHESE   Dr.   |                                       | <u> </u>      |                  |              |              |                 |                  |
| Rowan U   Anthony de   |                                       |               |                  |              | L            | Only            | None             |
| MAYO   EE & Consultant    Dr. Robert   6/8/01-8/8/01   \$50/hour   7/23/2001   Only   None   |                                       |               |                  |              | 1            |                 |                  |
| ## ## ## ## ## ## ## ## ## ## ## ## ##   |                                       | Anthony J.    | (contract)       | non-material | 12/31/2002   |                 | None             |
| MEYERS (NASA)  Dr. I.  Options granted 9/9/96 to 3/3/97; all options   |                                       |               |                  |              |              |                 |                  |
| MILLER  Dr. I.  None None Options granted 9/9/96 to 3/3/97; all options  |                                       | Dr. Robert    | 6/8/01-8/8/01    | \$50/hour    | 7/23/2001    | Only            | None             |
| Options granted 9/9/96 to 3/3/97; all options  |                                       |               |                  |              |              |                 |                  |
| 9/9/96 to 3/3/97; all options  | NASA)                                 | Dr. I.        | <u>-</u>         | -            | •            | None            | None             |
| 9/9/96 to 3/3/97; all options  |                                       | 3 5 5 7 5     |                  |              |              |                 |                  |
| MILLER DR. all options   |                                       | \$            |                  |              | 1            |                 |                  |
|  |                                       |               |                  | 1            |              |                 |                  |
| (Lehigh II) Mitrodia (1994)  |                                       |               |                  |              | 1            | all options     |                  |
| -   \$250   6/12/1997   expired   None   | (Lehigh U)                            | Allied :      | <u> </u>         | \$250        | 6/12/1997    | expired         | None             |
|  | · · · · · · · · · · · · · · · · · · · |               |                  | 3            | - No         |                 |                  |

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|                        |                 |                  |              |              | EE 0 Disselve I |                         |
|------------------------|-----------------|------------------|--------------|--------------|-----------------|-------------------------|
|                        |                 |                  |              |              | EE & Director   |                         |
|                        |                 |                  |              |              | Options Issued  | Shares Owned            |
| MILLS                  |                 |                  | Employee     |              | Beginning       | Beginning               |
| (EE & Director)        | Dr. Randell     | •                | Salary       | -            | 9/9/96          | 1991                    |
|                        | 2.40            | 3/30/05-3/29/06  | \$80/hour    |              |                 |                         |
| NANSTEEL               |                 | 3/30/06-3/29/07  | \$80/hour    | 8/24/2005    | EE Options      |                         |
|                        | Dr. MegizW      | 3/30/07-8/31/08  | \$80/hour    |              | Only            | None                    |
| NESTEROV               |                 |                  |              |              |                 |                         |
| (Moscow Power          |                 |                  |              |              |                 |                         |
| Engineering            |                 |                  |              |              |                 |                         |
| Institute)             | Dr. S.B.        | _ ]              | -            | _            | None            | None                    |
| NIEDRA                 |                 |                  |              |              |                 |                         |
| (NASA)                 | Dr. J.          | -                | -            | _            | None            | None                    |
| NONINSKI               |                 |                  |              |              | 110110          | 110110                  |
| (Brookhaven)           | Dr. V.          | _                | _            | _            | None            | None                    |
| ONUMA                  | D1. V.          |                  | Employee     | -            | EE Options      | None                    |
|                        | Dr. Tokovoobi   |                  | Salary       |              |                 | None                    |
| (Employee)             | Dr. Takeyoshi   | -                | Salary       | -            | Only            | None                    |
|                        |                 |                  |              |              |                 | Purchased shares        |
|                        |                 |                  |              | ]            |                 | 9/20/96 &               |
|                        | ·               |                  |              |              | Options granted | 7/2/97; transferred all |
|                        |                 |                  |              |              | 4/7/97          | shares                  |
|                        |                 |                  |              |              | to 4/27/98;     | to ScottishPower        |
|                        | İ               |                  |              |              | some options    | Ventures, Inc.          |
| PACIFICORP             |                 | _                | _            |              | expired         | 6/21/07                 |
| PETERSON               |                 | -                |              |              | expired         | 0/2/10/                 |
|                        | Dr. S.H.        |                  |              |              | None            | None                    |
| (Westinghouse)         | υг. э.п.        | 2/1/96-1/31/97   | \$100/hour   | -            | None            | None                    |
|                        |                 | 1/1/97-4/30/97   | Options Only |              |                 |                         |
|                        |                 |                  |              | 4/26/95      |                 |                         |
|                        | `               | 3/15/00-3/18/00  | \$5,000      | 5/9/00       |                 |                         |
|                        |                 | 10/8/01-4/8/02   | \$125/hour   | 3/9/00       |                 |                         |
|                        |                 | 4/8/02-10/8/02   | \$125/hour   |              |                 |                         |
|                        |                 | 10/9/02-10/8/03  | \$125/hour   |              |                 |                         |
|                        |                 | 10/9/03-10/8/04  | \$100/hour   | !            | Options granted | _                       |
|                        |                 | 10/9/04-10/8/05  | \$100/hour   |              | 9/9/96-1/14/06; | Some options            |
| PHILLIPS               |                 | 10/9/05-10/8/06  | \$100/hour   |              | some options    | exercised               |
| (PSU,UNM,LANL)         | Dr. Jonathan    | 10/9/06-10/807   | \$100/hour   |              | exercised       | 9/1/06 & 2/20/07        |
| RAY                    |                 |                  | Employee     |              | EE Options      |                         |
| (Employee)             | Dr. Paresh      |                  | Salary       | -            | Only            | None                    |
| SANKAR                 | Dr.             | 3/17/03-3/16/04  | \$50/hour    |              | EE Options      |                         |
| (EE & Consultant)      | Javasree        | 3/22/04-3/21/05  | \$50/hour    | -            | Only            | None                    |
|                        |                 |                  |              |              |                 |                         |
| SAVOYE                 |                 |                  |              |              |                 |                         |
| (MIT Lincoln Labs)     | Dr. G.W.        | •                |              | -            | None            | None                    |
|                        |                 | 1/5/05-1/4/06    | \$800/day    |              |                 |                         |
| SCHARER                |                 | 1/5/06-1/4/07    | \$100/hour   |              |                 |                         |
| (U Wisconsin)          | Dr. John        | 1/5/07-1/4/08    | \$110/hour   | 11/14/2005   | None            | None                    |
| SCHMALZEL              | D7.             | 6/10/02-10/31/02 | \$10         |              |                 |                         |
| (Rowan U)              | Journ F         | (contract)       | non-material | 12/31/2002   | None            | None                    |
| SHANNON                |                 |                  | Employee     |              | EE Options      |                         |
| (Employee)             | Tina            | -                | Salary       | -            | Only            | None                    |
| SHAUBACH               |                 |                  |              |              |                 |                         |
| (Thermacore)           | Dr. R.M.        | -                | _            | _            | None            | None                    |
| 11                     | I LOL. IN. IVI. |                  | <u> </u>     | <del> </del> |                 | 1,10,110                |
| SIMMONS                | DI. K.W.        |                  | 1            | 1            | i               |                         |
| SIMMONS<br>(Lebiah II) |                 | _                | _            | _            | None            | None                    |
| (Lehigh U)             | Dr. G.          | -                | -            | -            | None            | None                    |
|                        | Dr. G.          | -                | -            | -            | None<br>None    | None<br>None            |

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| TURNER            |             |                 |           |   |            |      |
|-------------------|-------------|-----------------|-----------|---|------------|------|
| (Spectral Data)   | Dr. Gary L. | -               | -         | - | None       | None |
| VOIGT             | Dr.         |                 | ·         |   | EE Options |      |
| (EE & Consultant) | Andreas     | 8/27/04-8/26/05 | \$50/hour | - | Only       | None |
| WATTS             |             |                 |           |   |            |      |
| (INEL)            | Dr. K.D.    | -               | -         |   | None       | None |
| WEISMANN          | Dr. H.      | •               | •         | • | None       | None |
| WIESMANN          | DrH.        | -               | -         |   | -          | -    |
| WRUBEL            |             |                 | 3         |   |            |      |
| (INP Greifswald)  | Dr. Th.     | -               |           | - | None       | None |
| ZEA               |             |                 | Employee  |   | EE Options |      |
| (Employee)        | Dr. Hugo    | •               | Salary    | • | Only       | None |

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## **ATTACHMENT B**

## MASTER LIST OF CITED AND SUBMITTED DOCUMENTS

| U.S. Patent Doc   | ument     | Name of Patentee of         | Date of Publication             |
|-------------------|-----------|-----------------------------|---------------------------------|
| Code <sup>w</sup> | Kind      | Applicant of Cited Document | of Cited Document<br>MM-DD-YYYY |
| Number            | (if known |                             |                                 |
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| 2,708,656         |           | Fermi                       | 05-17-1955                      |
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| 3,297,484         |           | Niedrach                    | 01-10-1967                      |
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| 3,359,422         |           | Pollock                     | 12-19-1967                      |
| 3,377,265         |           | Caeser                      | 04-09-1968                      |
| 3,448,035         |           | Serfass                     | 06-03-1969                      |
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| 3,669,745         |           | Beccu                       | 06-13-1972                      |
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| 3,816,192         |           | Brower                      | 06-11-1974                      |
| 3,835,019         |           | Lovelock                    | 09-10-1974                      |
| 3,917,520         |           | Katz                        | 11-04-1975                      |
| 4,000,036         | ļ <u></u> | Ensley                      | 12-1976                         |
| 4,095,118         | į         | Rathbun                     | 06-1978                         |
| 4,149,931         |           | Christensen                 | 04-1979                         |
| 4,155,712         |           | Taschek                     | 05-22-1979                      |
| 4,202,004         |           | Anderson                    | 05-1980                         |
| 4,265,720         |           | Winstel                     | 05–05-1981                      |
| 4,274,938         |           | Schulten                    | 06-23-1981                      |
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| 4,337,126         |           | Gilligan, III et al.        | 06-29-1982                      |
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| 4,488,490         |           | Betts                       | 12-18-1984                      |

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|-----------|------------------|------------|
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| 4,968,395 | Pavelle          | 11-06-1990 |
| 4,986,887 | Gupta            | 01-22-1991 |
| 5,215,729 | Buxbaum          | 06-01-1993 |
| 5,273,635 | Gernert          | 12-28-1993 |
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| 5,819,073 | Nakamura         | 10-1998    |
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| 6,690,705    | Maksimov et al.  | 02-2004    |
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Letter from Senator Max Cleland to Ms. Jane Cooksey with attachments, March 24, 2000 (see Attachment O)

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## INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet 1 1

|                        | PTO/SB/08B (Modified) |  |  |  |  |  |
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| Application Number     | 09/501,621            |  |  |  |  |  |
| Filing Date            | 02/09/2000            |  |  |  |  |  |
| First Named Inventor   | Mills                 |  |  |  |  |  |
| Group Art Unit         | 1745                  |  |  |  |  |  |
| Examiner Name          | Kalafut               |  |  |  |  |  |
| Attorney Docket Number | 8AC4-DIV1             |  |  |  |  |  |

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| Examine r Initials*   | Cite<br>No. 1 | Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published. |  |  |  |  |  |
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| ST         | TATEMENT E              | BY A  | APPLICANT    | First Named Inventor   | Mills                |  |
|            |                         |       |              | Group Art Unit         | 1754                 |  |
|            | (use as many she        | ets a | s necessary) | Examiner Name          | Langel               |  |
| Sheet      | 1                       | of    | 4            | Attorney Docket Number |                      |  |

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| Examiner<br>Initials* | Cite Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published. |   |  |  |  |  |  |
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| S1                                | TATEMENT I                       | BY A | APPLICANT | First Named Inventor   | Mills                 |  |
|                                   |                                  |      |           | Group Art Unit         | 1754                  |  |
| (use as many sheets as necessary) |                                  |      |           | Examiner Name          | Langel                |  |
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| Examiner<br>Initials* | Cite<br>No. <sup>1</sup>  | Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.  |  |  |  |  |  |  |
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| Examiner  |   | Date       | , |
| Signature |   | Considered |   |
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|            | ATEMENT B                        |       |                        | First Named Inventor | Mills      |  |
|            |                                  |       |                        | Group Art Unit       | 1754       |  |
|            | (use as many she                 | ets a | s necessary)           | Examiner Name        | Langel     |  |
| Sheet      | Sheet 3 of 4                     |       | Attorney Docket Number |                      |            |  |

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| Examiner Initials* | Cite<br>No. 1  | Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published. |  |  |  |  |  |
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| Examiner  | Date       |   |
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| ST                                | ATEMENT E            | BY A | APPLICANT | First Named Inventor   | Mills      |  |
|                                   |                      |      |           | Group Art Unit         | 1754       |  |
| (use as many sheets as necessary) |                      |      |           | Examiner Name          | Langel     |  |
| Sheet                             | 4                    | of.  | 4         | Attorney Docket Number |            |  |

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<sup>&</sup>lt;sup>1</sup> Unique citation designation number. <sup>2</sup> Applicant is to place a check mark here is English language Translation is attached.

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|            | ATEMENT E            |        |              | First Named Inventor   | Mills            |  |
|            |                      |        |              | Group Art Unit         | 1754             |  |
|            | (use as many she     | eets a | s necessary) | Examiner Name          | Langel           |  |
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|            | ATEMENT B            |       | <del>-</del> | First Named Inventor   | Mills            |  |  |  |
|            |                      |       |              | Group Art Unit         | 1754             |  |  |  |
|            | (use as many she     | ets a | s necessary) | Examiner Name          | Langel           |  |  |  |
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|            | ATEMENT E            |       |              | First Named Inventor   | Mills            |  |
|            |                      |       |              | Group Art Unit         | 1754             |  |
|            | (use as many she     | ets a | s necessary) | Examiner Name          | Langel           |  |
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| ST         | ATEMENT              | BY A   | APPLICANT    | First Named Inventor   | Mills            |  |
|            |                      |        |              | Group Art Unit         | 1754             |  |
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<sup>&</sup>lt;sup>1</sup> Unique citation designation number. <sup>2</sup> See attached Kinds of U.S. Patent Documents. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST. 3) <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

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|                    |               | Kind Code <sup>5</sup><br>Office <sup>3</sup> Number <sup>4</sup> (if known) |          |     | Applicant of Cited Document |  | Passages or Relevant<br>Figures Appear   |              |
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<sup>\*</sup>EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>&</sup>lt;sup>1</sup> Unique citation designation number. <sup>2</sup> See attached Kinds of U.S. Patent Documents. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST. 3) <sup>4</sup>For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.





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|                                   |                      |      |              | Application Number   | 09/501,621       |  |  |
| IN                                | FORMATION            | اD ا | SCLOSURE     | Filing Date  | February 9, 2000 |  |  |
| STATEMENT BY APPLICANT            |                      |      |              | First Named Inventor   | Mills            |  |  |
|                                   |                      |      |              | Group Art Unit   | 1754             |  |  |
| (use as many sheets as necessary) |                      |      | s necessary) | Examiner Name  | Langel           |  |  |
| Sheet                             | 1                    | of   | 1            | Attorney Docket Number   | 62-226-8AC4-DIV1 |  |  |

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| Examiner<br>Initials* | Cite<br>No. <sup>1</sup> | Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published. | T <sup>2</sup> |
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<sup>1</sup> Unique citation designation number. 2 Applicant is to place a check mark here is English language Translation is attached.

Page 1 of 2 Filing Receipt for Documents Filed in U.S. Patent and Trademark Office U.S. Serial No.: 09/501,621 Inventor: Mills Date: February 6, 2002

**Enclosed Items:** 

Response to final Office Action- 90 pages Appendix to Response – 168 pages

Petition for Three Months Extension

Notice of Appeal

Rule 132 Declaration of Dr. Mills

Two (2) Information Disclosure Statements

Check: \$650

Copies of following publications of Dr. Mills providing experimental evidence:

- 1. H. Conrads, R. Mills, Th. Wrubel, "Emission in the Deep Vacuum Ultraviolet from an Incandescently Driven Plasma in a Potassium Carbonate Cell", Plasma Sources Science and Technology, submitted.
- 2. R. L. Mills, P. Ray, "Stationary Inverted Lyman Population Formed from Incandescently Heated Hydrogen Gas with Certain Catalysts", Chem. Phys. Letts., submitted.
- 3. R. L. Mills, B. Dhandapani, J. He, "Synthesis and Characterization of a Highly Stable Amorphous Silicon Hydride", Int. J. Hydrogen Energy, submitted.
- 4. R. L. Mills, A. Voigt, B. Dhandapani, J. He, "Synthesis and Characterization of Lithium Chloro Hydride", Int. J. Hydrogen Energy, submitted.
- 5. R. L. Mills, P. Ray, "Substantial Changes in the Characteristics of a Microwave Plasma Due to Combining Argon and Hydrogen", New Journal of Physics, submitted.
- 7. R. L. Mills, P. Ray, "High Resolution Spectroscopic Observation of the Bound-Free Hyperfine Levels of a Novel Hydride Ion Corresponding to a Fractional Rydberg State of Atomic Hydrogen", Int. J. Hydrogen Energy, in press.
- 8. R. L. Mills, E. Dayalan, "Novel Alkali and Alkaline Earth Hydrides for High Voltage and High Energy Density Batteries", Proceedings of the 17<sup>th</sup> Annual Battery Conference on Applications and Advances, California State University, Long Beach, CA, (January 15-18, 2002), in press.
- 9. R. Mayo, R. Mills, M. Nansteel, "On the Potential of Direct and MHD Conversion of Power from a Novel Plasma Source to Electricity for Microdistributed Power Applications", IEEE Transactions on Plasma Science, submitted.
- 10. R. Mills, P. Ray, J. Dong, M. Nansteel, W. Good, P. Jansson, B. Dhandapani, J. He, "Excessive Balmer  $\alpha$  Line Broadening, Power Balance, and Novel Hydride Ion Product of Plasma Formed from Incandescently Heated Hydrogen Gas with Certain Catalysts", Int. J. Hydrogen Energy, submitted.
- 11. R. Mills, E. Dayalan, P. Ray, B. Dhandapani, J. He, "Highly Stable Novel Inorganic Hydrides from Aqueous Electrolysis and Plasma Electrolysis", Japanese Journal of Applied Physics, submitted.
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- 13. R. L. Mills, P. Ray, B. Dhandapani, J. He, "Spectroscopic Identification of Fractional Rydberg States of Atomic Hydrogen", J. of Phys. Chem. (letter), submitted.
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- 15. R. L. Mills, P. Ray, B. Dhandapani, M. Nansteel, X. Chen, J. He, "Spectroscopic Identification of Transitions of Fractional Rydberg States of Atomic Hydrogen", Quantitative Spectroscopy and Energy Transfer, submitted.
- 16. R. L. Mills, P. Ray, B. Dhandapani, M. Nansteel, X. Chen, J. He, "New Power Source from Fractional Quantum Energy Levels of Atomic Hydrogen that Surpasses Internal Combustion", Spectrochimica Acta, Part A, submitted.
- 17. R. L. Mills, P. Ray, "Spectroscopic Identification of a Novel Catalytic Reaction of Rubidium Ion with Atomic Hydrogen and the Hydride Ion Product", Int. J. Hydrogen Energy, in press.
- 18. R. Mills, J. Dong, W. Good, P. Ray, J. He, B. Dhandapani, "Measurement of Energy Balances of Noble Gas-Hydrogen Discharge Plasmas Using Calvet Calorimetry", Int. J. Hydrogen Energy, in press.
- 19. R. L. Mills, A. Voigt, P. Ray, M. Nansteel, B. Dhandapani, "Measurement of Hydrogen Balmer  $\alpha$  Line Broadening and Thermal Power Balances of Noble Gas-Hydrogen Discharge Plasmas", Int. J. Hydrogen Energy, in press.
- 20. R. Mills, P. Ray, "Vibrational Spectral Emission of Fractional-Principal-Quantum-Energy-Level Hydrogen Molecular Ion", Int. J. Hydrogen Energy, in press.
- 21. R. Mills, P. Ray, "Spectral Emission of Fractional Quantum Energy Levels of Atomic Hydrogen from a Helium-Hydrogen Plasma and the Implications for Dark Matter", Int. J. Hydrogen Energy, Vol. 27, No. 3, (2002) pp. 301-322.
- 22. R. Mills, P. Ray, "Spectroscopic Identification of a Novel Catalytic Reaction of Potassium and Atomic Hydrogen and the Hydride Ion Product", Int. J. Hydrogen Energy, Vol. 27, No. 2, (2002), pp. 183-192.
- 23. R. Mills, "BlackLight Power Technology-A New Clean Hydrogen Energy Source with the Potential for Direct Conversion to Electricity", Proceedings of the National Hydrogen Association, 12 th Annual U.S. Hydrogen Meeting and Exposition, *Hydrogen: The Common Thread*, The Washington Hilton and Towers, Washington DC, (March 6-8, 2001), pp. 671-697.

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| STATEMENT BY APPLICANT            |                      |     |              | First Named Inventor   | Mills      |  |
|                                   |                      |     |              | Group Art Unit         | 1754       |  |
| (use as many sheets as necessary) |                      |     | s necessary) | Examiner Name          | Langel     |  |
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| Examiner Initials* | Cite<br>No. ' | Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.                                   | T² |
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|           |                      |        |              | Group Art Unit         | 1754       |  |
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|                       |                          | OTHER PRIOR ART — NON PATENT LITERATURE DOCUMENTS   | • •            |
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| Examiner<br>Initials* | Cite<br>No. <sup>1</sup> | Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.                         | T <sup>2</sup> |
|                       |                          | R. Mills, P. Ray, J. Dong, M. Nansteel, W. Good, P. Jansson, B. Dhandapani, J. He, "Excessive Balmer Line Broadening, Power Balance, and Novel Hydride Ion Product of Plasma Formed from Incandescently Heated Hydrogen Gas with Certain Catalysts", Int. J. Hydrogen Energy, submitted |                |
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|                       |                          | R. L. Mills, P. Ray, "Spectroscopic Identification of a Novel Catalytic Reaction of Rubidium Ion with Atomic Hydrogen and the Hydride Ion Product", Int. J. Hydrogen Energy, in press.  |                |

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<sup>&</sup>lt;sup>1</sup> Unique citation designation number. <sup>2</sup> Applicant is to place a check mark here is English language Translation is attached.

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| S         | <b>FATEMENT</b>       | BY A   | APPLICANT    | First Named Inventor   | Mills                 |  |
|           |                       |        |              | Group Art Unit         | 1754                  |  |
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| Initials* | No. 1 | Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.  |              |  |  |  |  |  |
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| Substitute for form 1449A/PTO                    | Сотр                 | olete if Known |
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| INFORMATION DISCLOSURE<br>STATEMENT BY APPLICANT | Filing Date          | 02/02/2000     |
| STATEMENT BY APPLICANT                           | First Named Inventor | Mills          |
|  | Group Art Unit       | 1745           |
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**Examiner Name** 

Attorney Docket Number

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<sup>\*</sup>EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Unique citation designation number. 2 See attached Kinds of U.S. Patent Documents. 3 Enter Office that issued the document, by the two-letter code (WIPO Standard ST. 3) 4 For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. 5 Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. 6 Applicant is to place a check mark here if English language Translation is attached.

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| STA          | STATEMENT BY APPLICANT |       | PPLICANT      | First Named Inventor   | Mills      |  |  |
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<sup>\*</sup>EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>&</sup>lt;sup>1</sup> Unique citation designation number. <sup>2</sup> Applicant is to place a check mark here is English language Translation is attached.

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| Examiner<br>Signature |   | Date<br>Considered   | 1     |  |  |  |  |  |

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| INFORMATION DISCLOSURE STATEMENT BY APPLICANT |                  | Complete if Known |              |                        |            |   |
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| ST  | ATEMENT E        | BY A              | PPLICANT     | First Named Inventor   | Mills      |   |
|   |                  |                   |              | Group Art Unit         | 1745       |   |
|   | (use as many she | ets as            | s necessary) | Examiner Name          | Kalafut    | _ |
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|                                       |                          | 85. Mills et al., "Highly Pumped Inverted Balmer and Lyman Populations," New Journal of Physics, submitted.   |  |  |  |  |  |  |
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|            |                      |       |              | Group Art Unit         | 1745          |
|            | (use as many she     | ets a | s necessary) | Examiner Name          | Kalafut       |
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|                        |               | 84. Mills et al., "Comparison of Balmer α Line Broadening and Power Balances of Helium-<br>Hydrogen Plasma Sources," Braz. J. Phys., submitted. (Internet Publication Date: March 12, 2003.)  |                |
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| Examiner<br>Signature  |               | Date<br>Considered  | <u> </u>       |

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| ST         | ATEMENT B   | BY A               | PPLICANT   | First Named Inventor   | Mills      |  |  |
|            |   |                    |            | Group Art Unit         | 1745       |  |  |
|            | (use as many she  | ets as             | necessary) | Examiner Name          | Kalafut    |  |  |
| Sheet      | 21  | of                 | <i>31</i>  | Attorney Docket Number |            |  |  |

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| Examine r Initials*   | Cite<br>No. 1 | Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.                               | T <sup>2</sup> |
|                       |               | 76. Mills et al., "Comparison of Catalysts and Microwave Plasma Sources of Spectral Emission of Fractional-Principal-Quantum-Energy-Level Atomic and Molecular Hydrogen," Journal of Applied Spectroscopy, submitted. (Internet Publication Date: Feb. 12, 2002.)                             |                |
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|                       |               | 71. Mills et al., "Power Source Based on Helium-Plasma Catalysis of Atomic Hydrogen to Fractional Rydberg States," Contributions to Plasma Physics, submitted.  |                |
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| Examiner<br>Signature |               | Date<br>Considered  | •              |

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|            | <b>TATEMENT</b>                  |            |            | First Named Inventor   | Mills         |
|            |                                  |            |            | Group Art Unit         | 1745          |
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|                       |               | 68. Mills, et. al. "Stationary Inverted Balmer and Lyman Populations for a CW HI Water-<br>Plasma Laser." IEEE Transactions on Plasma Science, submitted. (Internet Publication Date: August 16, 2002)  |                |
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| Sheet      | 23                   | of     | 91         | Attorney Docket Number |               |

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|                        |                          | 60. Mills et al., "Synthesis of HDLC Films from Solid Carbon," Journal of Materials Science, Vol. 39, (2004), pp. 3309-3318. (Internet Publication Date: May 3, 2002.)   |                |
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|                       |               | 52. Mills et al., "Bright Hydrogen-Light Source due to a Resonant Energy Transfer with Strontium and Argon lons," New Journal of Physics, Vol. 4, (2002), pp. 70.1–70.28. (Internet Publication Date: October, 2002)  |                |
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|                        | ,             | 44. Mills, et. al. "Synthesis and Characterization of Lithium Chloro Hydride", <i>International Journal of Hydrogen Energy</i> , submitted. (Internet Publication Date: January 7, 2002.)   |  |  |  |  |  |  |
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| Examiner<br>Signature  |               | Date<br>Considered  |  |  |  |  |  |  |

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| ST         | TATEMENT E           | BY A  | APPLICANT    | First Named Inventor   | Mills         |  |  |  |
|            |                      |       |              | Group Art Unit         | 1745          |  |  |  |
|            | (use as many she     | ets a | s necessary) | Examiner Name          | Kalafut       |  |  |  |
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|                        |               | 36. Mills et al., "Emission Spectroscopic Identification of Fractional Rydberg States of Atomic Hydrogen Formed by a Catalytic Helium-Hydrogen Plasma Reaction," Vacuum, submitted. (Internet Publication Date: Oct. 9, 2001.)   |                |
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| Examiner<br>Signature  |               | Date<br>Considered   | I              |

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| Substitute | for form 1449B/PTO |       |              | Compl                  | ete if Known |
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| INF        | FORMATION          | DIS   | SCLOSURE     | Filing Date            | 02/02/2000   |
| ST         | ATEMENT B          | Y A   | APPLICANT    | First Named Inventor   | Mills        |
|            |                    |       |              | Group Art Unit         | 1745         |
| <br> -<br> | (use as many she   | ets a | s necessary) | Examiner Name          | Kalafut      |
| Sheet      | 27                 | of    | 91           | Attorney Docket Number |              |

|                        |                          | OTHER PRIOR ART — NON PATENT LITERATURE DOCUMENTS  |                |
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| Examine<br>r Initials* | Cite<br>No. <sup>1</sup> | Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.                    | T <sup>2</sup> |
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| Examiner<br>Signature  |                          | Date<br>Considered   | J              |

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|           | STATEMENT BY APPLICANT |          |       |                    | First Named Inventor   | Mills                                 |  |
|           |                        |          |       |                    | Group Art Unit         | 1745                                  |  |
|           | (use as mar            | ny sheel | ts as | necessary)         | Examiner Name          | Kalafut                               |  |
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| Examine<br>r Initials* | Cite<br>No. <sup>1</sup> | Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.                   | T <sup>2</sup> |
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| Examiner<br>Signature  |                          | Date<br>Considered  | <u> </u>       |

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| i          | <b>TATEMENT</b>      |          |            | First Named Inventor   | Mills                                 |  |  |
|            |                      |          |            | Group Art Unit         | 1745                                  |  |  |
|            | (use as many sh      | heets as | necessary) | Examiner Name          | Kalafut                               |  |  |
| Sheet      | 31                   | of       | <i>31</i>  | Attorney Docket Number |                                       |  |  |

| Examine Cite Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the |        |  |   |  |  |  |  |  |
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## Copies of Documents Listed on SB08A and B Forms Filed in:

U.S. Serial No.: 09/501,621

Inventor: Mills

Filing Date: 2/9/2000

Examiner: Kalafut

Art Unit: 1745

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Today's Date: 30 October 2007